

Transportation Conformity Under the Clean Air Act

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Summary

Under the Clean Air Act, areas that have not attained one or more of the six National Ambient Air Quality Standards (currently more than 100 areas with a combined population of 143 million) must develop State Implementation Plans (SIPs) providing for implementation, maintenance, and enforcement of the NAAQS. The act requires that, in these areas, federal agencies not engage in, approve, permit, or provide financial support for activities that do not “conform” to the area’s SIP.

Although a wide range of federal funding and programs is subject to conformity, it is transportation planning (and ultimately highway funding) that is most commonly affected. Before a new transportation plan or transportation improvement program (TIP) can be approved by the Federal Highway Administration or Federal Transit Administration or a new non-exempt project can receive federal funding in a nonattainment area, a regional emissions analysis must generally demonstrate that the projected emissions from the entire transportation system, including the new projects, are consistent with the emissions ceilings established in the SIP. While some express concern at the potential impact of these conformity determinations in delaying or altering new highway projects, others note that the process simply obligates the federal government to support rather than undermine the legally adopted state plans for achieving air quality.

In the late 1990s and early 2000s, there were numerous lapses of conformity: 63 areas, in 29 states and Puerto Rico, had lapses between 1997 and 2003. In 2005, however, Congress amended the Clean Air Act to provide a 12-month grace period to demonstrate compliance following an area’s designation as nonattainment before conformity will lapse. Since 2007, only seven areas have experienced a conformity lapse, despite the imposition of more stringent ambient air quality standards for both ozone and particulate matter. All but one of the lapses since 2007 were resolved within a year.

As Congress considers reauthorization of surface transportation programs this year, questions have again been raised regarding the impact of conformity requirements, and whether the Environmental Protection Agency’s (EPA’s) current proposal to strengthen the ambient air quality standard for ozone will affect the number of areas required to make conformity determinations. Particular concern has been expressed for rural areas that may never have been classified nonattainment for an air quality standard before. The number of areas ultimately affected will depend on numerous factors, including the level at which EPA sets the final ozone standard and trends in emissions and weather in the period before EPA designates any new nonattainment areas. Although these factors introduce elements of uncertainty in future projections, most rural areas are unlikely to be designated nonattainment for the ozone standard, because they do not have ozone monitors in place. In the few rural areas that have been designated nonattainment, conformity needs only to be determined if there is a non-exempt transportation project that depends on federal funding or approval—a rare occurrence. In addition, EPA’s conformity regulations provide exceptions for areas with insignificant motor vehicle emissions, which may facilitate the demonstration of conformity in any rural areas that will be designated nonattainment.

This report explains the statutory conformity requirements, reviews the recent history of their implementation, and examines how conformity requirements might affect areas designated nonattainment for a revised ozone air quality standard.

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This report explains the Clean Air Act requirement that federal departments and agencies demonstrate that their activities—including projects that they fund—“conform” to state plans for achieving air quality standards. The report explains the statutory requirements, reviews the recent history of their implementation, and examines how conformity requirements might affect areas designated “nonattainment” for a revised ozone air quality standard. The Environmental Protection Agency (EPA) proposed such a revision in December 2014, and is under court order to finalize its review by October 1, 2015.

Conformity: The Basics

Transportation conformity, which is required by Section 176(c) of the Clean Air Act (CAA), was established by Congress as a means of insuring that federal actions, including the provision of federal funds for transportation projects, not undermine air quality in areas that have not attained national ambient air quality standards (NAAQS) and in areas that were nonattainment, but have been redesignated as maintenance areas under CAA Section 175A. By potentially withholding federal funds for non-conforming projects, conformity serves as an important stimulus for state and local governments to assess potential air quality impacts of projects and, if necessary, modify them to assure that they not interfere with progress toward or maintenance of clean air.

Under Section 176(c), departments and agencies of the federal government are prohibited from engaging in, supporting or providing financial assistance for, licensing, permitting, or approving any activity that does not conform to a State Implementation Plan (SIP) after such a plan has been submitted and approved. SIPs are a key element in achieving CAA standards. Under the act, depending on the NAAQS and the classification of the nonattainment area,¹ states are required to develop SIPs within 18 months to four years of EPA’s designation of an area as nonattainment.

In general, in areas that have not attained one or more of the six NAAQS² established by EPA (currently more than 100 areas with a combined population of 143 million³) the state must develop a SIP providing for implementation, maintenance, and enforcement of the NAAQS. In most cases, a SIP contains an inventory of existing emissions, projections of future emissions (generally including a motor vehicle emissions budget), and an identification of measures that will be taken to reduce the emissions in order to reach attainment by the statutory deadline.⁴ Deadlines vary, depending on the severity of the pollution, but generally a nonattainment area must demonstrate that it is making annual emission reductions sufficient to reach attainment. (For a more extended discussion of the requirements for nonattainment areas, see CRS Report RL30853, *Clean Air Act: A Summary of the Act and Its Major Requirements*.)

¹ “Classification” refers to the severity of the pollution: the ozone NAAQS, for example, classifies areas in one of five categories (Marginal, Moderate, Serious, Severe, or Extreme) depending on the ozone concentrations monitored over a three-year period.

² The standards are for ozone, particulate matter, carbon monoxide, nitrogen dioxide, sulfur dioxide, and lead.

³ For a listing, see U.S. EPA, Green Book, Summary Nonattainment Area Population Exposure Report, <http://www.epa.gov/airquality/greenbook/popexp.html>. Data as of January 30, 2015.

⁴ An important exception to this general rule, contained in CAA Section 182(a)(4), is that Marginal ozone nonattainment areas (i.e., the nonattainment areas with monitored ozone concentrations closest to achieving the standard) do not need to demonstrate that the SIP will attain the standard by the applicable attainment date, provided that the SIP meets statutory requirements for an inventory of emissions, the imposition of Reasonably Available Control Technology on stationary sources of emissions, requires permits for new or modified major stationary sources, and implements statutory requirements for emissions offsets.

Once an area has attained the NAAQS, it can be redesignated as a “maintenance” area if it revises its SIP to demonstrate how it will maintain compliance over a 20-year period. Conformity requirements apply to both nonattainment and maintenance areas.⁵

The act contains seven pages of detail regarding what constitutes a conforming project, and the requirements are further elaborated in the Code of Federal Regulations at 40 C.F.R. Part 93. In general, conformity to a SIP means that a proposed project or program “will not produce new air quality violations, worsen existing violations, or delay timely attainment of the national ambient air quality standards or delay interim milestones.”⁶

Transportation Conformity

Although a wide range of federal funding and programs is subject to conformity, it is transportation planning (and ultimately highway funding) that is most commonly affected. Transportation makes a substantial contribution to ambient concentrations of four of the six NAAQS pollutants: ozone, carbon monoxide, nitrogen dioxide, and particulate matter.⁷ Before a new transportation plan or transportation improvement program (TIP) can be approved by the Federal Highway Administration or Federal Transit Administration or a new non-exempt project can receive federal funding, a regional emissions analysis must generally demonstrate that the emissions of these pollutants or their precursors⁸ projected from the entire transportation system, including the new projects, are consistent with the emissions ceilings established in the SIP.⁹

Conformity must be demonstrated for the period ending on either the final year of the area’s long range transportation plan, or at the election of the metropolitan planning organization (MPO), after consultation with the air pollution control agency, the longest of:

- the first 10 years of the transportation plan;
- the latest year in the SIP that contains a motor vehicle emissions budget; or
- the year after completion of a regionally significant project.¹⁰

Conducting this analysis can involve federal, state, regional, and local transportation and environmental planners. Ultimately, the Federal Highway Administration and Federal Transit Administration make conformity determinations for the transportation plan, TIP, and/or project. The conformity determinations are based on the most recent estimates of emissions, population,

⁵ The number of counties required to demonstrate conformity because they are in maintenance areas can be substantial. There are not yet any such areas for the 2008 ozone standard (nonattainment areas themselves were designated less than three years ago), but for the preceding (1997) ozone NAAQS, 249 counties with 64 million people were designated as maintenance areas, in addition to the 186 counties with 101 million people that are still classified nonattainment.

⁶ U.S. EPA, “Transportation Conformity Rule Amendments: Flexibility and Streamlining,” Final Rule, 62 *Federal Register* 43780, August 15, 1997.

⁷ 40 C.F.R. 93.102(b)(1) limits the applicability of transportation conformity requirements to these four NAAQS pollutants.

⁸ Both ozone and particulate matter form in the atmosphere as the result of chemical reactions involving precursor emissions: ozone, for example, forms when volatile organic compounds and nitrogen oxides react in the presence of sunlight. Precursor pollutants are identified in 40 C.F.R. 93.102(b)(2).

⁹ CAA Section 176(c)(2)(A). As described below, in “Determining Conformity in a Rural Area,” if the SIP demonstrates that regional motor vehicle emissions are an insignificant contributor to the area’s air quality problem, the area is not required to conduct a regional motor vehicle emissions analysis to demonstrate conformity.

¹⁰ The authority to shorten the conformity horizon, as described in these three bullets, was added by Section 6011(c) of P.L. 109-59 in 2005, but no MPO has elected to use it.

employment, travel, and traffic congestion provided by a variety of agencies. Combining these data, the MPO or state DOT must estimate vehicle miles traveled and emissions, generally by using an approved EPA mobile source emissions model. These models are periodically updated to reflect the current mix of vehicles and their emission characteristics.

To reflect the changing nature of both economic and environmental inputs, both the statute and the regulations require that a nonattainment area's long-range Transportation Plan and its TIP demonstrate conformity at least every four years.¹¹ The statute and regulations also require that MPOs re-determine conformity of transportation plans and programs not later than two years after approval of a new State Implementation Plan or motor vehicle emissions budget.¹² In practice, many urban areas obtain a new determination that their TIP conforms on an annual basis.

Projects That Can Advance During a Lapse

In the absence of conformity, the regulations provide that a limited set of exempt projects can go forward.¹³ The list includes 20 categories of highway safety projects, rehabilitation and reconstruction of transit facilities, purchase of replacement buses and rail cars, noise attenuation projects, and pedestrian and bicycle facilities. It does not include most new transit or highway projects, however. EPA's Office of Transportation and Air Quality (OTAQ) defined the exempt projects as those that are "air quality neutral"—that is, they neither improve nor degrade air quality.

In addition to projects that are exempt by regulation, projects that were already approved and funded in the previous TIP may continue to be funded during a conformity lapse, provided that approval is not sought for a new phase of the project. Phases of a project include, among others, determination of environmental impacts under the National Environmental Policy Act, right-of-way acquisition, final design, and construction. Activities within each of those phases can continue for projects that were found to conform in the previous TIP.

Transportation Control Measures (TCMs) listed in an approved State Implementation Plan are also allowed to proceed during a conformity lapse. These projects can include programs for improved public transit, construction of HOV (high occupancy vehicle) lanes, traffic flow improvement programs, fringe parking, idling reduction programs, and pedestrian facilities.¹⁴

Determining Conformity in a Rural Area

In general, the statute and regulations assume that projects requiring a conformity determination will be located in urban or suburban areas, because most nonattainment areas have an urban or suburban core. But there are some nonattainment areas that are not urban or suburban. These areas would only need to demonstrate conformity if they had a non-exempt project that required federal funding or approval—a rare occurrence. Unlike areas with MPOs, they are not required to demonstrate conformity every four years.

¹¹ CAA Section 176(c)(4)(D)(ii); 40 C.F.R. 93.104(b)(3).

¹² CAA Section 176(c)(2)(E); 40 C.F.R. 93.104(e).

¹³ The kinds of projects that are exempt are listed in 40 CFR 93.126.

¹⁴ A full list of TCMs is provided in Section 108 of the Clean Air Act.

For the few rural areas that may have a federally funded project, EPA has developed separate procedures in 40 C.F.R. 93.109(f) that may deal with conformity. The section, which addresses “areas with insignificant motor vehicle emissions,” states:

... an area is not required to satisfy a regional emissions analysis ... for a given pollutant/precursor and NAAQS, if EPA finds through the adequacy or approval process that a SIP demonstrates that regional motor vehicle emissions are an insignificant contributor to the air quality problem for that pollutant/precursor and NAAQS. The SIP would have to demonstrate that it would be unreasonable to expect that such an area would experience enough motor vehicle emissions growth in that pollutant/precursor for a NAAQS violation to occur. Such a finding would be based on a number of factors, including the percentage of motor vehicle emissions in the context of the total SIP inventory, the current state of air quality as determined by monitoring data for that NAAQS, the absence of SIP motor vehicle control measures, and historical trends and future projections of the growth of motor vehicle emissions.

Most rural areas are unlikely to need to demonstrate conformity: the absence of monitoring data will mean that EPA cannot designate a rural area nonattainment in most cases. A nonattainment designation is based on the availability of three years of quality-controlled data from EPA-certified monitors. Approximately 814 U.S. counties (26% of the total) had ozone monitors reporting data to EPA in 2013; 2330 counties (74%), generally in less-populated areas, had no ozone monitoring.¹⁵ As a result, the majority of the nation’s counties are termed “unclassifiable” by EPA, and are not subject to conformity.

Experience of Areas That Fail to Meet Conformity Deadlines

Nonattainment areas that have not demonstrated conformity by the applicable deadline fall into one of two groups: those in a grace period, and those in a conformity lapse.

Grace Periods

In the 2005 surface transportation law,¹⁶ Congress amended Section 176(c) of the Clean Air Act to provide that areas that do not make a conformity determination for a transportation plan or TIP by the applicable deadline are given a 12-month grace period to demonstrate compliance before conformity will lapse.¹⁷ As shown in **Table 1**, since 2007, 34 areas in 18 states have used this grace period. As a result of this, as well as cooperation between air quality and transportation planners, all but seven areas in six states (**Table 2**) have been able to demonstrate conformity without incurring a lapse.

Conformity Lapses

The experience of areas in the last decade was a marked change from the experience of areas prior to the 2005 amendments. From 1997 to 2003, 63 areas in 29 states and Puerto Rico¹⁸ had

¹⁵ Office of Air Quality Planning and Standards, U.S. EPA, personal communication, May 1, 2015.

¹⁶ The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), P.L. 109-59.

¹⁷ Section 176(c)(9).

¹⁸ Alabama, Alaska, California, Colorado, Connecticut, Delaware, Georgia, Idaho, Indiana, Kansas, Kentucky,

experienced a lapse, according to EPA. With a few notable exceptions,¹⁹ these areas were either medium-size cities or they were suburban areas near some of the nation's largest cities.

Table 1. Nonattainment Areas that Failed to Obtain a Conformity Determination by the Applicable Deadline, 2007-2014

(The following 34 areas triggered a 12-month grace period under the provisions of CAA Section 176(c)(9).)

Nonattainment/ Maintenance Area(s) Affected	Pollutant	Start Date of Lapse Grace Period	Length of Lapse Grace Period
New Castle County, DE/Cecil County, MD	1997 ozone	4/16/2007	1 month
Christen County, KY	1997 ozone	7/7/2007	3 months
Montgomery, TN	1997 ozone	7/1/2007	7 months
Knoxville, TN	PM _{2.5}	7/1/2007	5 months
Chattanooga, TN	PM _{2.5}	7/1/2007	7 months
Great Falls, MT	CO	3/22/08	12 months
Southern Portion of NJ MPO	1997 ozone	5/24/08	4 months
Memphis, TN	1997 ozone	3/23/08	1 week
Missoula, MT	PM ₁₀	6/7/08	1 year
Triad Area, NC	PM _{2.5}	10/1/08	5 months
Steubenville-Wiarton, OH-WV	PM _{2.5} and 1997 ozone	8/1/08	1 month
Weeling, WV-OH	1997 ozone	2/1/08	1 month
Parkersburgh-Marietta, WV-OH	1997 ozone	2/1/2008	1 month
Great Falls, MT	CO	3/22/2008	1 year
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	1997 ozone	4/15/2009	2 weeks
Terre Haute, IN	1997 ozone	6/1/2009	4 weeks
Parkersburgh-Marietta, WV-OH	1997 ozone	2/1/2009	2 months
Fort Wayne, IN	1997 ozone	5/15/2009	3 weeks
Muncie, IN	1997 ozone	6/13/2009	1 month
Reno, NV	PM ₁₀	4/8/2009	3 months
Charlotte-Gastonia-Rock Hill, NC-SC	1997 ozone	5/3/2009	1 year

Louisiana, Michigan, Missouri, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Puerto Rico, Rhode Island, Tennessee, Texas, Utah, Washington, West Virginia, and Wisconsin. Since 1993, areas in 35 states have experienced a lapse: the 29 listed above, plus Maine, Massachusetts, Minnesota, Oregon, Pennsylvania, and Virginia.

¹⁹ The Los Angeles area was out of conformity for two months in 1998, Houston for five months in 1999-2000, and the Bay Area of California for two short stretches in 2002 and 2003. None of the other top 15 cities in population experienced a conformity lapse. At the other end of the spectrum, about 15 relatively small cities, such as Great Falls, MT, and Ashland, KY, experienced lapses.

Nonattainment/ Maintenance Area(s) Affected	Pollutant	Start Date of Lapse Grace Period	Length of Lapse Grace Period
Clarksville-Hopkinsville, TN-KY	1997 ozone	7/28/2009	9 months
Billings, MT	CO	6/29/2009	1 year
Louisville, KY-Southern IN MPO	1997 ozone	12/8/2009	11 months
Sussex County, DE (WILAMPCO)	1997 ozone	2/17/2010	1 month
Yuma, AZ	PM ₁₀	3/1/2010	9 months
St. Louis, MO	1997 ozone	6/29/2011	2 months
Birmingham, AL	1997 ozone	11/1/2011	1.5 months
Beaumont, TX	1997 ozone	9/25/2011	1 year
Yakima, WA	PM ₁₀	6/1/2011	10 months
Wheeling, WV	PM and 1997 ozone	3/20/2012	3.5 months
Evansville, IN	PM _{2.5}	11/30/2012	1 year
Great Falls, MT	CO	4/23/2013	1 year
Huntington-Ashland, KY	1997 ozone	6/16/2013	1 year

Source: U.S. EPA, Office of Transportation and Air Quality, April 2015.

Notes: PM = particulate matter; PM₁₀ = PM that is 10 microns or smaller in diameter; PM_{2.5} = PM that is 2.5 microns or smaller in diameter; CO = carbon monoxide.

Table 2. Nonattainment Areas That Experienced a Conformity Lapse, 2007-2014

Nonattainment/ Maintenance Area(s) Affected	Pollutant	Start Date of Lapse	Length of Lapse
Great Falls, MT	CO	3/22/2009	1 month
Billings, MT	CO	6/20/2010	1 day
Beaumont, TX	1997 ozone	9/25/2012	2 years, 5 months
Pinal County, AZ	PM ₁₀	7/2/2013	6 months
Evansville, IN	PM _{2.5}	11/30/2013	6 months
Reading, PA (Berk County)	2008 ozone	7/20/2013	5 months
Huntington-Ashland, KY	1997 ozone	6/16/2014	10 months

Source: U.S. EPA, Office of Transportation and Air Quality, April 2015.

Notes: PM = particulate matter; PM₁₀ = PM that is 10 microns or smaller in diameter; PM_{2.5} = PM that is 2.5 microns or smaller in diameter; CO = carbon monoxide.

Effect of a Lapse

Both before and after the addition of grace periods, most of the lapsed areas have returned to conformity quickly. Since 2007, only two areas (Huntington-Ashland, KY, and Beaumont, TX) have been in a lapse for more than six months. In the 1997-2003 period, of the 63 areas that experienced a lapse, 40 conformed within six months.

Of the areas that lapsed for more than a year, few were major urban areas. The Government Accountability Office (GAO), citing EPA conformity program managers, reported that “most of these areas did not have pending new projects and, therefore, were not under time pressures to resolve their lapse.”²⁰

None of the lapsed areas actually lost transportation funding. DOT does not reduce the amount of funding a state receives, but without a conforming TIP, only exempt projects, TCMs, and project phases approved and begun in an earlier conforming TIP may be funded. Ultimately, when an area develops a new conforming TIP, the projects in that TIP will become eligible to receive funds.

Aside from the observations noted above, it is difficult to generalize about the experiences of these areas. Each has, or had, its own special set of circumstances leading to the conformity lapse, and the transportation agencies and EPA responded in numerous, often unique ways. Many of the areas were allowed to demonstrate conformity by adopting additional emission reduction measures, by using a newer approved emissions model, by updating data used in the models, or by modifying the list of projects included in their TIP. In a 2003 survey, GAO found that, over the previous six years, only five metropolitan areas had to change transportation plans in order to resolve a conformity lapse.²¹

Pre-1999 Conformity Lapses

In general, until a March 1999 court decision,²² state and federal transportation agencies followed a less stringent interpretation of the act’s requirements that allowed numerous projects to be funded and to continue through design and construction on the grounds that they had been approved and thus “grandfathered” prior to the lapse. In March 1999, however, the U.S. Court of Appeals for the D.C. Circuit struck down the grandfather clause. Since then, EPA and DOT have implemented more stringent requirements, through revised regulations.²³

Atlanta

Atlanta is generally considered the “poster-child” for the most extreme effects of a lapse in conformity. Atlanta was classified as a Serious ozone nonattainment area under the one-hour ozone standard that EPA promulgated in 1979.²⁴ While it had implemented numerous controls to

²⁰ U.S. GAO, *Environmental Protection: Federal Planning Requirements for Transportation and Air Quality Protection Could Potentially Be More Efficient and Better Linked*, Report GAO-03-581, April 2003, p. 14. Hereinafter referred to as “GAO Report.”

²¹ GAO Report, p. 4.

²² *Environmental Defense Fund v. EPA*, 167 F.3d 641 (D.C. Cir. 1999).

²³ A chronological listing and links to EPA conformity rules can be found at <http://www.epa.gov/otaq/stateresources/transconf/conf-regs-c.htm>.

²⁴ In the 1990 Clean Air Act Amendments (P.L. 101-549), Congress required that ozone nonattainment areas be classified as Marginal, Moderate, Serious, Severe, or Extreme, depending on the degree to which monitored ozone

reduce emissions and improve air quality, it continued to exceed the 1979 ozone standard as of the late 1990s.

The Atlanta area is considered a prime example of sprawl development. In a 2001 report, the Atlanta Regional Commission (ARC), the federally designated MPO, found that, among 66 urban areas with populations greater than 500,000, Atlanta ranked 4th in land area, but 56th in population density. In large measure because of this sprawl, the Atlanta area also ranked 4th in the nation in vehicle miles traveled per capita.²⁵ Vehicle emissions were, therefore, major contributors to the area's ozone nonattainment.

At the time of the D.C. Circuit's March 1999 conformity decision, the Atlanta metropolitan area was already in the second year of a conformity lapse. (The lapse began January 17, 1998, and lasted until July 26, 2000.) Initially, U.S. DOT had allowed the continued funding of numerous highway projects in Atlanta, despite the lapse in conformity, on the grounds that they were grandfathered. In January 1999, the Sierra Club and two local environmental groups filed suit, however, challenging 61 of the grandfathered projects, contending that they should not have been allowed to proceed except as part of a conforming TIP.²⁶ In light of the D.C. Circuit opinion, the parties reached a settlement agreement in June 1999, under which many of the grandfathered projects were halted, but 17 were allowed to go forward.

The heart of the Atlanta settlement was a new Interim Transportation Improvement Program (or ITIP). When conformity lapsed in January 1998, ARC had developed and received approval for an ITIP, which included the various grandfathered projects. In light of the litigation and D.C. Circuit decision, ARC developed a second (and ultimately a third) ITIP that the state and federal transportation departments, and EPA, as well as the environmental groups that had filed suit agreed could go forward during the lapse of conformity.

Because they followed the D.C. Circuit decision and were themselves the product of settlement negotiations in a separate suit, the second and third Atlanta ITIPs are the best examples of what is allowed during a conformity lapse. These ITIPs, according to ARC, included only three kinds of projects: projects that were exempt under 40 CFR 93.126 (discussed above, on page 3); Transportation Control Measures; and a small group of projects that had received necessary approvals or funding and were allowed to continue to the completion of the phase that they were in.²⁷ In all, about \$700 million in projects that would have expanded highway capacity were stopped.

Ultimately, in July 2000, ARC received approval for a new Transportation Improvement Program. The new program de-emphasized new highway capacity. Instead, 40% of its funds were dedicated to transit, 10% to bicycle and pedestrian facilities, 21% to safety measures and bridge and intersection improvements, and 26% to highway capacity.²⁸

Besides the new TIP, an important result of Atlanta's conformity lapse was the development of the Georgia Regional Transportation Authority, whose Board included the heads of six state

concentrations exceeded the ozone standard. For a more extended discussion of the categorization scheme, see CRS Report RL30853, *Clean Air Act: A Summary of the Act and Its Major Requirements*, by James E. McCarthy and Claudia Copeland, pp. 4-7.

²⁵ Data are from Atlanta Regional Commission, *Highlighting Regional Progress: 2001 Annual Report*, p. 5, <http://www.atlreg.com/aboutus/AnnualReport2001.pdf>.

²⁶ *Georgians for Transportation Alternatives v. Shackelford*, No. 99-CIV-0160 (N.D. Ga., filed Jan. 22, 1999).

²⁷ Personal communication, Chris Chovan, Atlanta Regional Commission, August 2002.

²⁸ See "DOT, EPA Clear Atlanta Transportation Plan, Freeing \$700 Million in U.S. Highway Money," *Daily Environment Report*, July 27, 2000, p. A-14.

agencies as well as nine members appointed by the Governor. The authority was widely credited with improving coordination among transportation, planning, and environmental officials.

Thus, although conformity requirements disrupted Atlanta's transportation planning, they appear to have served their intended function, forcing transportation and environmental officials to confer regarding the environmental impacts of transportation programs before and during major planning, design, and construction decision points and reorienting the area's transportation planning to a more multi-modal approach than the previous one, which relied heavily on new highway capacity. Not all parties were happy with these results, of course, but it would be hard to argue that the revisions violated the intent of the conformity requirements.

Conformity's Growing Reach?

When CRS wrote on transportation conformity in 2004, the report²⁹ stated that the impact of conformity requirements might be expected to grow in the next few years for several reasons. First, the growth of emissions from sport utility vehicles and other light trucks and greater than expected increases in vehicle miles traveled appeared to be making it more difficult to demonstrate conformity. Second, recent court decisions (noted above) had tightened the conformity rules, making it more difficult to grandfather new projects. And third, the implementation of more stringent air quality standards for ozone and particulate matter (PM) in 2004 would mean that additional areas would be subject to conformity, many for the first time. Thus, the report concluded, numerous metropolitan areas would face a temporary suspension of highway and transit funds unless they imposed sharp reductions in vehicle, industrial, or other emissions. CRS was not alone in this expectation: about one-third of local transportation planners responding to a GAO survey expected to have difficulty demonstrating conformity in the future.³⁰

Instead, in the time period since then, for a variety of reasons, conformity appears to have been a routine matter in most areas. What happened? A combination of higher fuel cost and the economic recession led to a reduction in vehicle miles traveled and a smaller share of new vehicle sales in the SUV and light truck categories. New emission control requirements for motor vehicles, power plants, and other sources also kicked in, substantially reducing emissions of ozone-forming compounds.³¹

Air quality data from before and after the promulgation of EPA's 2008 ozone NAAQS show the effect of these factors (see **Table 3**). In July 2007, when EPA proposed lowering the ozone NAAQS from what was effectively 84 parts per billion (ppb)³² to 75 ppb, the agency identified 398 counties³³ with monitoring data exceeding the proposed standard, based on the most recent

²⁹ CRS Report RL32106, *Transportation Conformity Under the Clean Air Act: In Need of Reform?*, by James E. McCarthy.

³⁰ GAO Report, previously cited, p. 4.

³¹ Tighter vehicle emission and fuel standards for light duty vehicles ("Tier 2" standards) were phased in from 2004 to 2009. Emission and fuel standards for highway diesel trucks were phased in beginning in 2006. Power plants were subject to the Clean Air Interstate Rule, which reduced NOx emissions, beginning in 2010.

³² The standard, prior to 2008 was 0.08 parts per million. Because of rounding conventions, areas with concentrations of 84 ppb or less were considered to be in attainment.

³³ See http://www.epa.gov/groundlevelozone/pdfs/20070621_maps.pdf. With a few exceptions (notably in Wyoming and western Colorado), a map of the 398 counties looks remarkably similar to the December 2014 map of counties that currently exceed the proposed December 2014 revision of the ozone NAAQS. Compare to Figure 2 in CRS Report R43092, *Ozone Air Quality Standards: EPA's 2015 Revision*, by James E. McCarthy.

three years of data (2003-2005).³⁴ The Regulatory Impact Analysis that accompanied the final standard in March 2008, using data for 2004-2006, identified 345 counties exceeding the 75 ppb NAAQS. By May 2012, when the nonattainment areas were actually designated, the number of counties in nonattainment had fallen to 232, based mostly on data for 2008-2010.³⁵

Table 3. Projected vs. Actual Counties Exceeding the 2008 Ozone NAAQS

Date	Event	Monitored Period ^a	Number of Counties with Monitors Exceeding the Proposed or Final 75ppb Standard
July 2007	proposal of 75 ppb NAAQS ^b	2003-2005	398
March 2008	promulgation of 75 ppb NAAQS	2004-2006	345
May 2012	designation of nonattainment areas	2008-2010 ^c	232

Source: U.S. EPA.

- Attainment determination is based on the average of the annual 4th highest monitored eight-hour ozone concentration for the most recent three-year period.
- EPA proposed to set the primary NAAQS somewhere in the range of 70 to 75 ppb. The number of counties exceeding a 70 ppb standard as of July 2007 was 533.
- Some area designations were based on 2009-2011 data.

As EPA stated in 2012, in the materials accompanying the formal designations:

Air quality continues to improve across the nation as a result of successful federal, state and local pollution reduction efforts. EPA designated 113 areas as not meeting the 1997 ozone standards set at 84 parts per billion. Less than half that number are not meeting the 2008 standards. In addition, many of the areas designated today cover a smaller geographic area than the previous standards.... Only three areas in two states (California and Wyoming) have not been nonattainment for previous ozone standards. Wyoming is the only state that has not previously had an area designated nonattainment for ozone.³⁶

EPA's 2015 Ozone NAAQS

EPA is currently considering a more stringent NAAQS for ozone again: a revised NAAQS was proposed in December 2014, and EPA is under court order to make a final decision by October 1, 2015.³⁷ During the public comment period on the proposed rule, concerns regarding the extent of ozone nonattainment and thus the burden of demonstrating conformity have been raised, much as

³⁴ Compliance with the ozone NAAQS is based on the average of the fourth highest monitored concentration in each year, averaged over the most recent three-year period.

³⁵ U.S. EPA, "Nonattainment Designations for the 2008 Ozone Standards—Counties by State, April 30, 2012 and May 31, 2012," at <http://www.epa.gov/groundlevelozone/designations/2008standards/final/finaldes.htm>. The list is comprised of 192 full counties and 40 partial counties.

³⁶ U.S. EPA, "National Air Quality Standards for Ozone, Final Designations—Questions and Answers," at <http://www.epa.gov/airquality/ozonepollution/designations/2008standards/final/qandafinal.htm>. The 113 areas designated nonattainment contained all or parts of 474 counties.

³⁷ For information on the proposed standard, see CRS Report R43092, *Ozone Air Quality Standards: EPA's 2015 Revision*.

they were when EPA proposed previous NAAQS revisions.³⁸ In the support documents that accompanied the December 2014 proposal, EPA identified 358 counties currently exceeding a proposed 70 ppb standard, using data for 2011-2013—or 558 counties if the NAAQS is set at 65 ppb.³⁹

Because of continuing air quality improvements, the number of counties with monitors exceeding the standard is almost certain to decline before the nonattainment areas are formally designated. At the earliest, designation of nonattainment areas will occur in late 2017.⁴⁰

- By that time, new (Tier 3) standards for motor vehicles and their fuels will have taken effect. In promulgating Tier 3 last year, EPA estimated that Tier 3 alone would reduce ozone-forming emissions of NO_x from motor vehicles by 10% in 2018.⁴¹
- Beginning in 2015, power plants are required to reduce ozone-forming NO_x emissions, as a result of implementation of the Cross-State Air Pollution Rule (CSAPR).⁴²
- The oil and gas industry, whose emissions of NO_x doubled and whose VOC emissions increased fivefold between 2005 and 2013,⁴³ are now subject to New Source Performance Standards that will reduce their emissions of ozone-forming volatile organic compounds (VOCs).⁴⁴
- Standards for stationary engines used for irrigation pumps and backup power supplies, which went into effect in 2013, will reduce emissions of both VOCs and NO_x.⁴⁵

These and other emission standards are likely to reduce the number of counties with ambient concentrations above the proposed new ozone standard (as compared to the list based on 2011-2013 monitoring data that was included in the support documents for EPA's proposed rule). In

³⁸ See, for example, National Association of Manufacturers, "Understanding Ground-Level Ozone Policies," February 2015, at <http://www.nam.org/Newsroom/Multimedia/Understanding-Ground-Level-Ozone-Policies/>.

³⁹ The list of counties is at <http://www.epa.gov/air/ozonepollution/pdfs/20141126-20112013datatable.pdf>.

⁴⁰ The Clean Air Act, in Section 107(d)(1)(B), requires the EPA Administrator to designate nonattainment areas within two years of promulgating a NAAQS revision, with the possibility of up to a one-year extension in case of insufficient information. Thus, if there is no extension, designation of ozone nonattainment areas would be due by October 1, 2017. Following promulgation, the designations must be published in the *Federal Register*, with an effective date anywhere from 30 to 120 days after publication occurs. This would bring the effective date to late 2017 or early 2018. In practice, the process often takes longer. Following the 2008 ozone NAQS revision, EPA took four years to designate nonattainment areas, as the result of a decision to reconsider the revised NAAQS. Following the 1997 revision, because of legal challenges, the process took seven years.

⁴¹ U.S. EPA, *Control of Air Pollution from Motor Vehicles: Tier 3 Motor Vehicle Emission and Fuel Standards Final Rule*, Regulatory Impact Analysis, p. ES-7, at <http://www.epa.gov/otaq/documents/tier3/420r14005.pdf>.

⁴² Because of a stay issued by the D.C. Circuit Court of Appeals, the original CSAPR implementation dates were delayed from 2012 and 2014, to 2015 and 2017. See <http://www.gpo.gov/fdsys/pkg/FR-2014-12-03/pdf/2014-28286.pdf>. CSAPR will reduce NO_x emissions by nearly 200,000 tons annually, when fully implemented in 2017. See <http://www.epa.gov/crossstaterule/pdfs/CSAPRPresentation.pdf>.

⁴³ U.S. EPA, National Emissions Inventory (NEI) Air Pollutant Emissions Trend Data, at <http://www.epa.gov/ttn/chief/trends/>.

⁴⁴ See CRS Report R42986, *An Overview of Air Quality Issues in Natural Gas Systems*, by Richard K. Lattanzio.

⁴⁵ See http://www.epa.gov/ttn/oarpg/t3/fact_sheets/rice_neshap_fr_fs081010.pdf and http://www.epa.gov/ttn/oarpg/t3/fact_sheets/rice_neshap_fr_fs021710.pdf.

areas that will be formally designated nonattainment, the emission standards cited above will facilitate the demonstration of conformity.

EPA's analysis projects the effects of these standards on ozone nonattainment areas. The agency's modeling shows only nine counties outside of California exceeding a 70 ppb ozone NAAQS in 2025, without any emission control measures additional to those already promulgated. A 65 ppb standard imposes a somewhat greater burden, but in that case, too, the modeling shows most areas reaching attainment without additional controls.⁴⁶ This would seem to imply that EPA expects most areas would not have difficulty demonstrating conformity despite a more stringent ozone standard.

Legislation

If Congress were to consider legislation to amend the transportation conformity requirements, the most likely vehicle for doing so would be legislation reauthorizing the surface transportation program. Funding expires at the end of May 2015. As of this writing (mid-May), reauthorization legislation had not begun to move, although there has been much talk of a temporary extension of funding. It is generally thought that any short-term extension would not include policy provisions. It is unclear, at this time, when Congress may consider broader reauthorization legislation.

The following bills have been introduced that would have indirect effects on conformity determinations for ozone nonattainment areas by modifying the dimensions of nonattainment areas or preventing or delaying EPA's proposed strengthening of the ozone NAAQS:

- H.R. 1044 would require each state to revise the boundaries of ozone and carbon monoxide nonattainment areas that include entire metropolitan or consolidated metropolitan statistical areas, to exclude counties that are not in violation of the NAAQS, as determined by air quality monitoring;
- H.R. 1327 / S. 640 would delay the review and revision of the ozone NAAQS for three years and require future reviews at 10-year rather than 5-year intervals;
- H.R. 1388 / S. 751 would prohibit a more stringent standard until at least 85% of the counties in nonattainment areas as of July 2, 2014, attained the current standard, and would require EPA to consider feasibility and cost in setting an ozone NAAQS, among other provisions; and
- H.R. 2111 would provide that no funds made available under any act may be used by EPA to implement any ozone standard promulgated after its date of enactment.

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⁴⁶ See U.S. EPA, "Counties Projected to Violate the Primary Ground-level Ozone Standard, Model projections for 2025," at <http://www.epa.gov/air/ozonepollution/pdfs/20141126-2025datatable.pdf>.

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